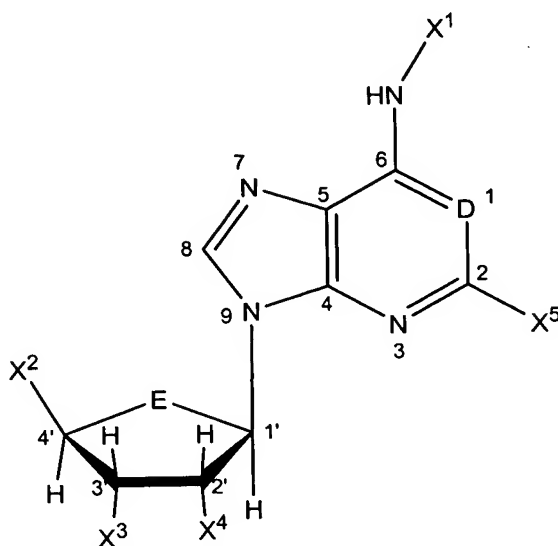


**Amendments to the Claims:**

1. (Currently amended) A product which is a compound of the formula:



wherein

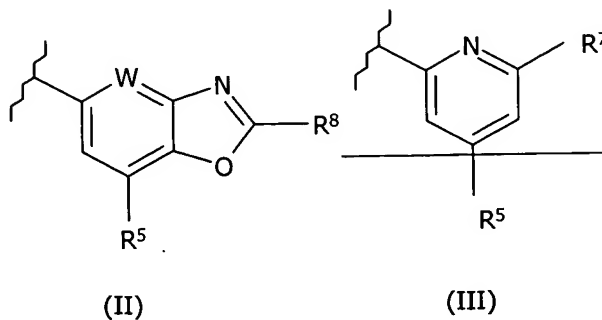
D is N or CH;

E is O, S or CH<sub>2</sub>;

X<sup>1</sup> is a group of the formula -CR<sup>20</sup>R<sup>21</sup>-CYCLE, where

R<sup>20</sup> and R<sup>21</sup> are the same or different and H, F or CH<sub>3</sub>;

CYCLE is of formula (II) or formula (III):



where:

R<sup>5</sup> is iodine, bromine, methyl or trifluoromethyl;

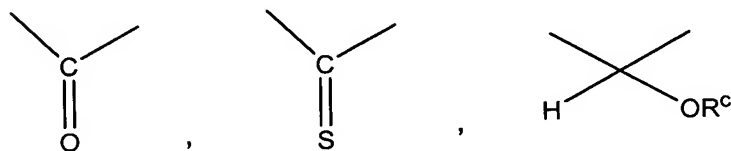
~~R<sup>7</sup> is H, halogen, C<sub>1</sub>-C<sub>10</sub>-acyl, OR<sup>11</sup>, CO<sub>2</sub>R<sup>11</sup> or CONR<sup>11</sup> where R<sup>11</sup> is C<sub>1</sub>-C<sub>10</sub>-hydrocarbyl optionally containing one or more in-chain and/or in-ring O linkages;~~

R<sup>8</sup> is -NR<sup>9</sup>R<sup>10</sup> or -COR<sup>9</sup>, where R<sup>9</sup> and R<sup>10</sup> are each independently methyl or ethyl; and

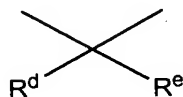
W is N or CH;

[.]X<sup>2</sup> is hydroxymethyl, (C<sub>1</sub>-C<sub>3</sub>)alkoxymethyl, (C<sub>3</sub>-C<sub>5</sub>)cycloalkoxy methyl, carboxy, (C<sub>1</sub>-C<sub>3</sub>)alkoxycarbonyl, (C<sub>3</sub>-C<sub>5</sub>)cycloalkoxy-carbonyl, 1,1-aminoiminomethyl, 1,1-(mono-N- or di-N,N-(C<sub>1</sub>-C<sub>4</sub>)alkylamino)iminomethyl, 1,1-(mono-N- or di-N,N-(C<sub>3</sub>-C<sub>5</sub>)cycloalkylamino)iminomethyl, carbamoyl, mono-N- or di-N,N-(C<sub>1</sub>-C<sub>4</sub>)alkylaminocarbonyl, mono-N- or di-N,N-(C<sub>3</sub>-C<sub>5</sub>)cycloalkyl-aminocarbonyl or N-(C<sub>1</sub>-C<sub>4</sub>)alkyl-N-(C<sub>3</sub>-C<sub>5</sub>)cycloalkylamino-carbonyl;

X<sup>3</sup> and X<sup>4</sup> are each independently hydrogen, alkyl, hydroxyalkyl, alkoxyalkyl, OR<sup>a</sup> or NR<sup>a</sup>R<sup>b</sup>, where R<sup>a</sup> and R<sup>b</sup> are independently hydrogen, alkyl, aralkyl, carbamoyl, alkyl carbamoyl, dialkylcarbamoyl, acyl, alkoxycarbonyl, aralkoxycarbonyl, aryloxycarbonyl, or, when X<sup>3</sup> and X<sup>4</sup> are both OR<sup>a</sup>, the two R<sup>a</sup> groups together may form



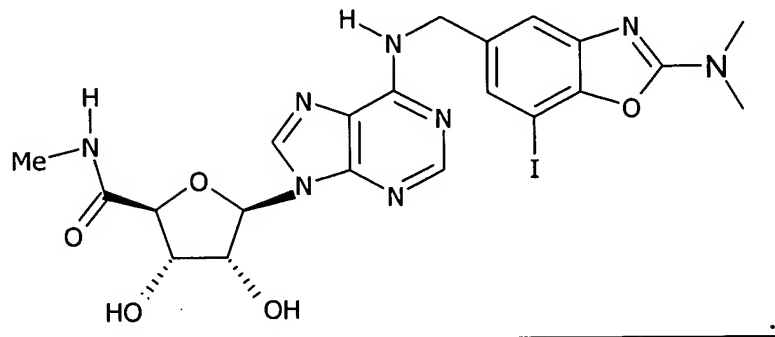
where R<sup>c</sup> is hydrogen or alkyl,



where R<sup>d</sup> and R<sup>e</sup> are independently hydrogen, alkyl, or together with the carbon atom to which they are attached may form a 1,1-cycloalkyl group;

X<sup>5</sup> is H, halogen, (C<sub>1</sub>-C<sub>10</sub>)alkyl, fluorinated (C<sub>1</sub>-C<sub>10</sub>) alkyl (e.g. trifluoromethyl), (C<sub>1</sub>-C<sub>10</sub>) alkoxyalkyl, (C<sub>1</sub>-C<sub>10</sub>)alkoxy, (C<sub>1</sub>-C<sub>10</sub>)alkylether, (C<sub>1</sub>-C<sub>10</sub>)thioalkoxy, (C<sub>1</sub>-C<sub>10</sub>)alkylthio, amino, (C<sub>1</sub>-C<sub>10</sub>)alkylamino, -COX<sup>6</sup>R<sup>25</sup> where X<sup>6</sup> is O or NH and R<sup>25</sup> is (C<sub>1</sub>-C<sub>4</sub>)alkyl optionally terminally substituted by an aryl or a heteroaryl group and additionally or alternatively terminally substituted by hydroxy, (C<sub>2</sub>-C<sub>10</sub>)alkenyl, (C<sub>2</sub>-C<sub>10</sub>)alkynyl, or is (C<sub>2</sub>-C<sub>10</sub>)alkenyl, (C<sub>2</sub>-C<sub>10</sub>)alkynyl in either case terminally substituted by an aryl or heteroaryl group and, when having a terminal methylic carbon atom, optionally further terminally substituted by hydroxy,

or a pharmaceutically acceptable salt or prodrug thereof or a pharmaceutically acceptable salt of such a prodrug[[]], provided that the compound is not



2. (Original) A product of claim 1, wherein

D is N;

E is O;

X<sup>2</sup> is mono-N- or di-N,N(C<sub>1</sub>-C<sub>4</sub>)alkylaminocarbonyl, mono-N-

or di-, N-(C<sub>3</sub>-C<sub>5</sub>)cycloalkylaminocarbonyl or N-(C<sub>1</sub>-C<sub>4</sub>)alkyl-N- (C<sub>3</sub>-C<sub>5</sub>)cycloalkylaminocarbonyl;

X<sup>3</sup> is OH or NH<sub>2</sub>;

X<sup>4</sup> is OH;

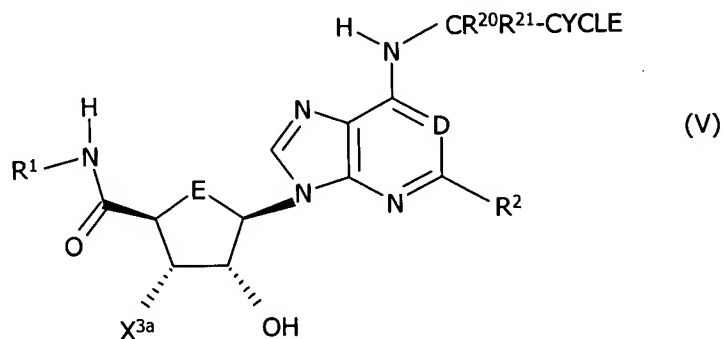
X<sup>5</sup> is H, halogen, (C<sub>1</sub>-C<sub>10</sub>)alkyl, trifluoromethyl, (C<sub>2</sub>-C<sub>10</sub>)alkenyl, (C<sub>2</sub>-C<sub>10</sub>)alkynyl, or either of the latter two groups where terminally substituted as defined in claim 1.

3. (Currently amended) A product of claim 1 ~~or claim 2~~ wherein X<sup>5</sup> is halogen.

4. (Currently amended) A product of claim ~~[[3]]~~ 2 wherein X<sup>5</sup> is bromine or chlorine.

5. (Currently amended) A product of ~~any preceding~~ claim 1 wherein R<sup>20</sup> and R<sup>21</sup> are both H.

6. (Currently amended) A product of claim 1 wherein the compound is of formula (V):



where:

-CR<sup>20</sup>R<sup>21</sup>-CYCLE[[,]] and D and R<sup>2</sup> are as defined in claim 1;

R<sup>2</sup> is H, halogen, (C<sub>1</sub>-C<sub>10</sub>)alkyl, fluorinated (C<sub>1</sub>-C<sub>10</sub>) alkyl (e.g. trifluoromethyl), (C<sub>1</sub>-C<sub>10</sub>) alkoxyalkyl, (C<sub>1</sub>-C<sub>10</sub>)alkoxy, (C<sub>1</sub>-C<sub>10</sub>)alkylether, (C<sub>1</sub>-C<sub>10</sub>)thioalkoxy, (C<sub>1</sub>-C<sub>10</sub>)alkylthio, amino, (C<sub>1</sub>-C<sub>10</sub>)alkylamino, -COX<sup>6</sup>R<sup>25</sup> where X<sup>6</sup> is O or NH and R<sup>25</sup> is (C<sub>1</sub>-C<sub>4</sub>)alkyl optionally terminally substituted by an aryl or a heteroaryl group and additionally or alternatively terminally substituted by hydroxy, (C<sub>2</sub>-C<sub>10</sub>)alkenyl, (C<sub>2</sub>-C<sub>10</sub>)alkynyl, or is (C<sub>2</sub>-C<sub>10</sub>)alkenyl, (C<sub>2</sub>-C<sub>10</sub>)alkynyl in either case terminally

substituted by an aryl or heteroaryl group and, when having a terminal methylic carbon atom, optionally further terminally substituted by hydroxy;

E is O, S or CH<sub>2</sub> (e.g. E is O and optionally D is N and R<sup>2</sup> is Cl or other halogen);

R<sup>1</sup> is C<sub>1</sub>-C<sub>4</sub> alkyl; and

X<sup>3a</sup> is -OH or -NH<sub>2</sub>.

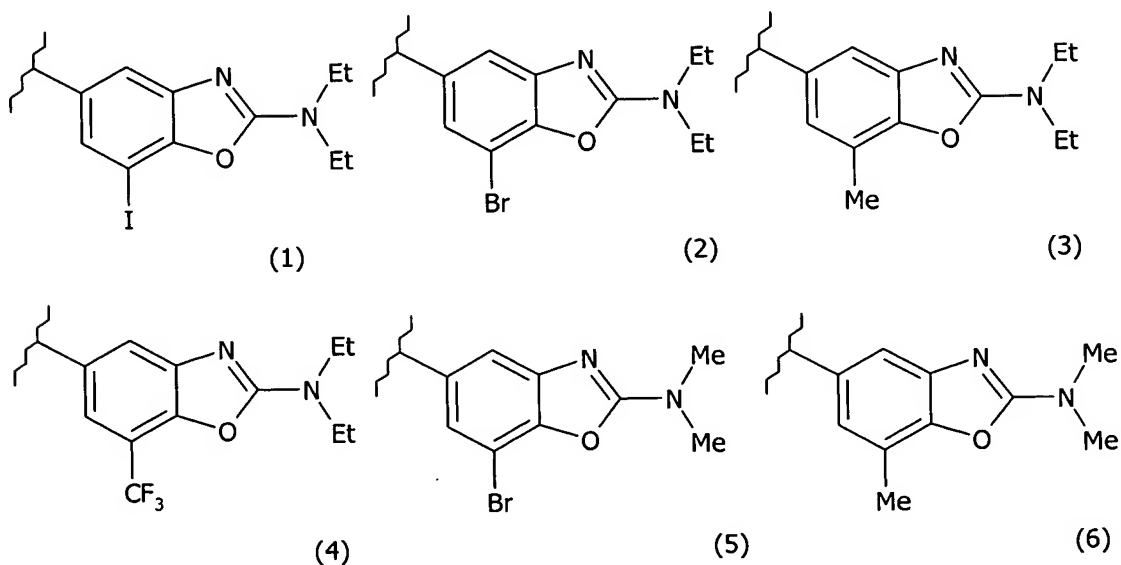
7. (Original) A product of claim 6 wherein E is O.

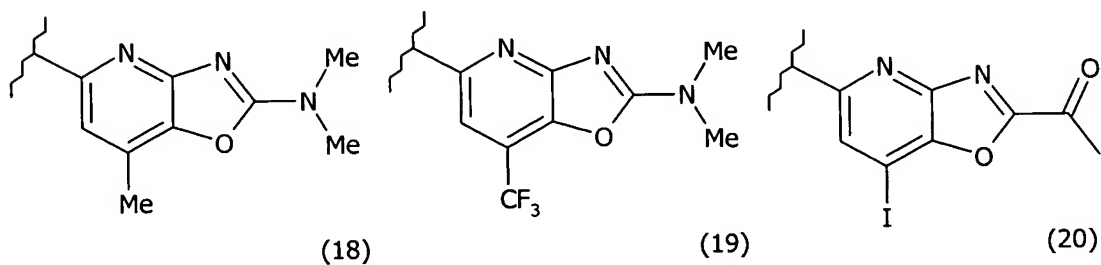
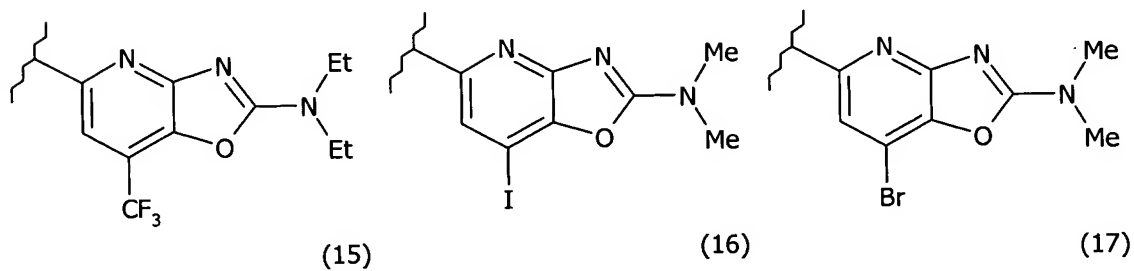
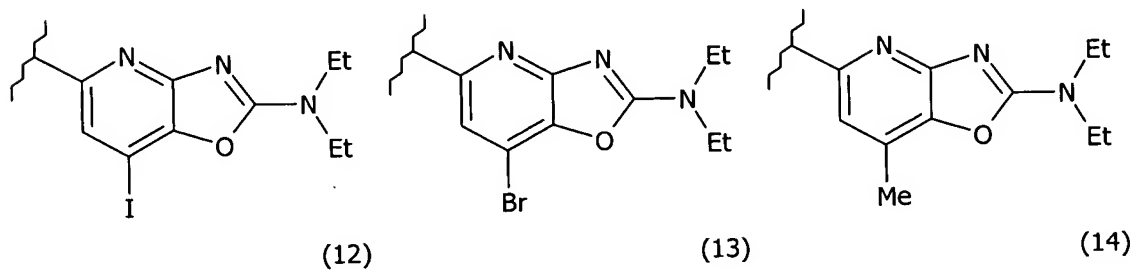
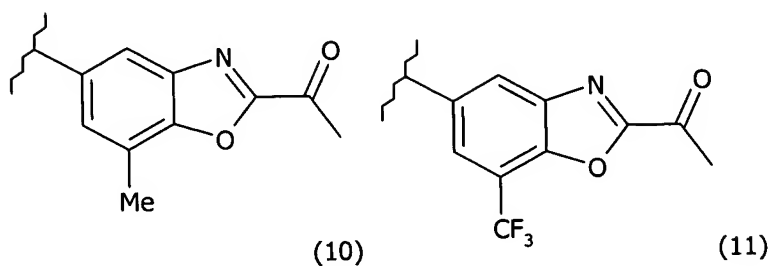
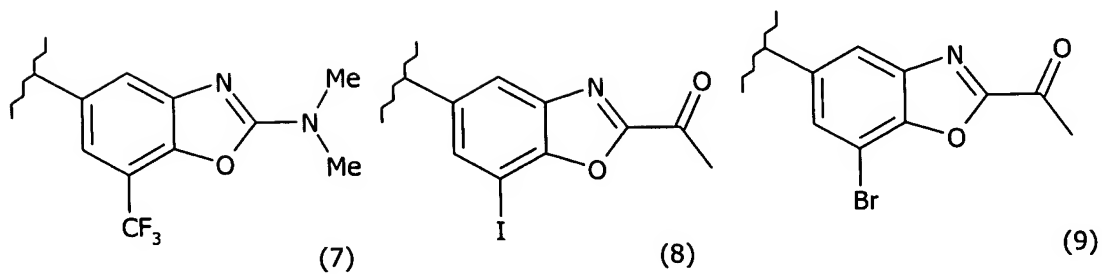
8. (Canceled)

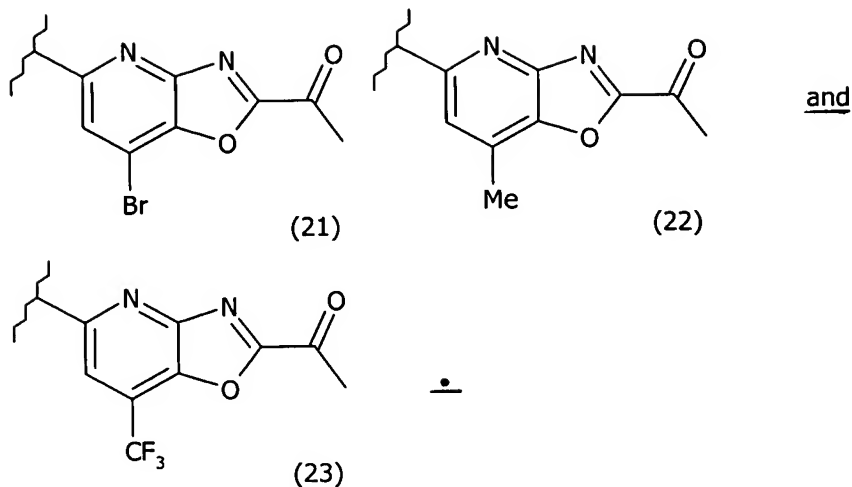
9. (Currently amended) A product of claim [[8]] 1 wherein W is N.

10. (Currently amended) A product of claim ~~8 or claim 9~~ 1 wherein R<sup>8</sup> is dimethylamino or diethylamino.

11. (Currently amended) A product of claim [[8]] 1 wherein CYCLE is selected from the group consisting of the following moieties:

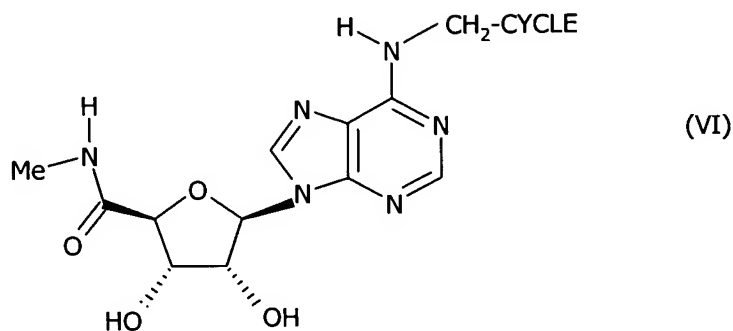






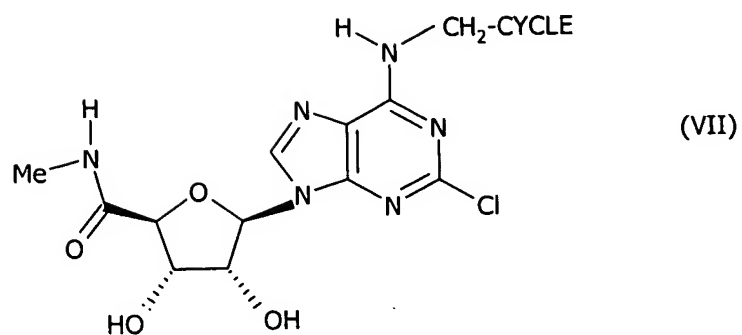
12. (Original) A product of claim 11 wherein CYCLE is of formula 1, 2, 3 or 4;  
or of formula 12, 13, 14 or 15.

13. (Currently amended) A product of ~~any of claims 8, 11 and 12~~ claim 1  
wherein the compound is of formula (VI):



where CYCLE is a group of formula (II).

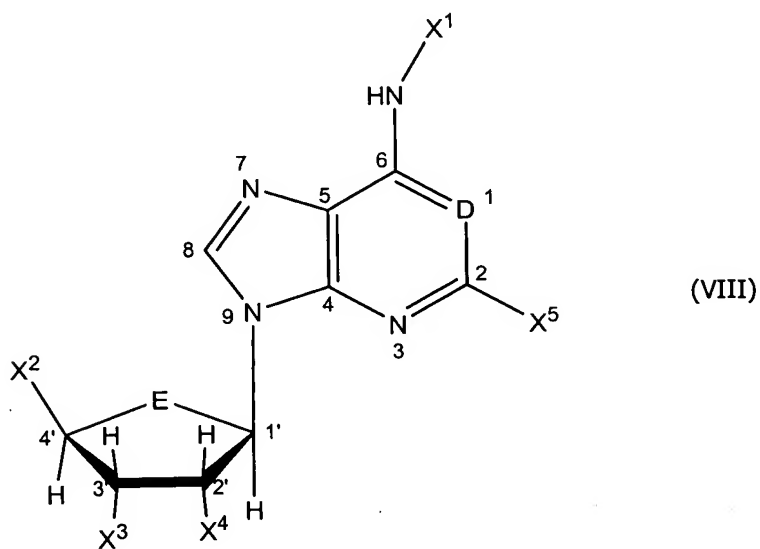
14. (Currently amended) A product of ~~any of claims 8, 11 and 12~~ claim 1  
wherein the compound is of formula (VII):



where CYCLE is a group of formula (II).

15-19. (Canceled)

20. (Currently amended) A compound product which is a compound of formula (VIII):



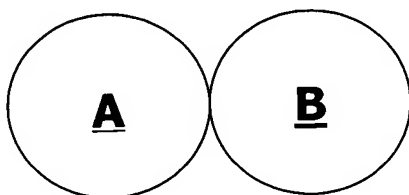
wherein

D is N or CH;

E is O, S or CH<sub>2</sub>;



X<sup>1</sup> is of the formula -CR<sup>20</sup>R<sup>21</sup>-CYCLE where R<sup>20</sup> and R<sup>21</sup> are the same or different and H, F or CH<sub>3</sub>; and CYCLE is a bicyclic (fused) heteroaromatic ring of the formula



wherein

ring A is a 5- or 6- membered ring characterised by the following features (in which ring positions are numbered relative to the linkage to -CR<sup>20</sup>R<sup>21</sup>-):

- i. a carbon atom at the 1-position;
- ii. carbon atom as CH or a nitrogen atom at position 2;
- iii. it is 3, 4 fused to ring B;
- iv. the 5-position ring atom is substituted by a moiety R<sup>5</sup> which is H, halogen, or an organic moiety having from 1 to 6 plurally valent atoms in addition to monovalent atoms selected from hydrogen and halogen;
- v. if a 6-membered ring, it has at the 6-position a nitrogen, or -CM- where M is H, CH<sub>3</sub> or F;

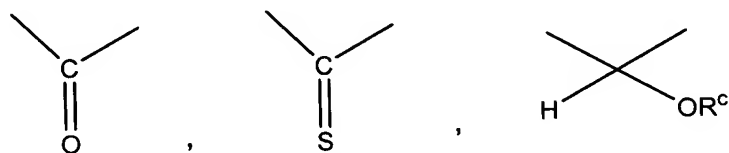
ring B is a 5 or 6 membered ring characterised by the following features:

- (a) an in-ring heteroatom including O, N or S joined to the 4-position of ring A;
- (b) said in-ring heteroatom is joined within the ring secondly to a carbon which is substituted by a moiety R<sup>8</sup> which is -N(C<sub>2</sub>H<sub>5</sub>)<sub>2</sub>;
- (c) an in-ring atom joined to the 3-position of ring A which is N, O, S or C, said C being in the form of a CH or CO group;
- (d) in the case of a 6-membered ring, the remaining ring member is nitrogen or carbon in the form of CH;

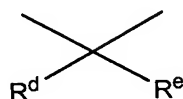
X<sup>2</sup> (the 4' substituent) is hydroxymethyl, (C<sub>1</sub>-C<sub>3</sub>)alkoxymethyl, (C<sub>3</sub>-C<sub>5</sub>)cycloalkoxy methyl, carboxy, (C<sub>1</sub>-C<sub>3</sub>)alkoxycarbonyl, (C<sub>3</sub>-C<sub>5</sub>)cycloalkoxycarbonyl, 1,1-aminoiminomethyl, 1,1-(mono-N- or di-N,N-(C<sub>1</sub>-C<sub>4</sub>)alkylamino)iminomethyl, 1,1-

(mono-N- or di-N,N-(C<sub>3</sub>-C<sub>5</sub>)cycloalkyl-amino)iminomethyl, carbamoyl, mono-N- or di-N,N-(C<sub>1</sub>-C<sub>4</sub>)alkylaminocarbonyl, mono-N- or di-N,N-(C<sub>3</sub>-C<sub>5</sub>)cycloalkylaminocarbonyl or N-(C<sub>1</sub>-C<sub>4</sub>)alkyl-N-(C<sub>3</sub>-C<sub>5</sub>)cycloalkylaminocarbonyl;

X<sup>3</sup> and X<sup>4</sup> are each independently hydrogen, alkyl, hydroxyalkyl, alkoxyalkyl, OR<sup>a</sup>NR<sup>a</sup>R<sup>b</sup>, where R<sup>a</sup> and R<sup>b</sup> are independently hydrogen ~~(most preferably X<sup>3</sup> and X<sup>4</sup> are OH)~~, alkyl, aralkyl, carbamoyl, alkyl carbamoyl, dialkylcarbamoyl, acyl, alkoxy carbonyl, aralkoxy carbonyl, aryloxy carbonyl, or, when X<sup>3</sup> and X<sup>4</sup> are both OR<sup>a</sup>, the two R<sup>a</sup> groups together may form



where R<sup>c</sup> is hydrogen or alkyl,



where R<sup>d</sup> and R<sup>e</sup> are independently hydrogen, alkyl, or together with the carbon atom to which they are attached may form a 1,1-cycloalkyl group;

X<sup>5</sup> is H, halogen, (C<sub>1</sub>-C<sub>10</sub>)alkyl, fluorinated (C<sub>1</sub>-C<sub>10</sub>) alkyl (e.g. trifluoromethyl), (C<sub>1</sub>-C<sub>10</sub>) alkoxyalkyl, (C<sub>1</sub>-C<sub>10</sub>)alkoxy, (C<sub>1</sub>-C<sub>10</sub>)alkylether, (C<sub>1</sub>-C<sub>10</sub>)thioalkoxy, (C<sub>1</sub>-C<sub>10</sub>)alkylthio, amino, (C<sub>1</sub>-C<sub>10</sub>)alkylamino, -COX<sup>6</sup>R<sup>25</sup> where X<sup>6</sup> is O or NH and R<sup>25</sup> is (C<sub>1</sub>-C<sub>4</sub>)alkyl optionally terminally substituted by an aryl or a heteroaryl group ~~{for example phenyl or a 5 or 6 membered heteroaryl group}~~ and additionally or alternatively terminally substituted by hydroxy, (C<sub>2</sub>-C<sub>10</sub>)alkenyl, (C<sub>2</sub>-C<sub>10</sub>)alkynyl, or is (C<sub>2</sub>-C<sub>10</sub>)alkenyl or (C<sub>2</sub>-C<sub>10</sub>)alkynyl in either case terminally substituted by an aryl or heteroaryl group ~~{for example phenyl or a 5 or 6 membered heteroaryl group}~~ and, when having a terminal methylic carbon atom, optionally further terminally substituted by

hydroxy[[.]], or a pharmaceutically acceptable salt or prodrug thereof, or a pharmaceutically acceptable salt of such a prodrug.

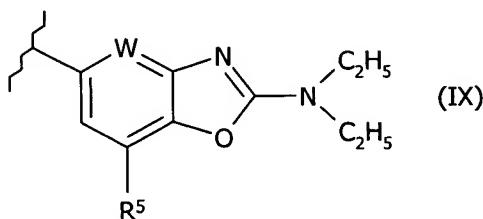
21. (Currently amended) A ~~compound~~ product of claim 20 wherein R<sup>5</sup> has from 1 to 4 plurally valent atoms.

22. (Currently amended) A ~~compound~~ product of claim 21 wherein the plurally valent atoms are selected from carbon, oxygen, sulfur and nitrogen.

23. (Currently amended) A ~~compound~~ product of claim 22 wherein R<sup>5</sup> is CH<sub>3</sub>, CF<sub>3</sub>, OH or NH<sub>2</sub>.

24. (Currently amended) A ~~compound~~ product of claim 20 wherein R<sup>5</sup> is H, I, Br or Cl.

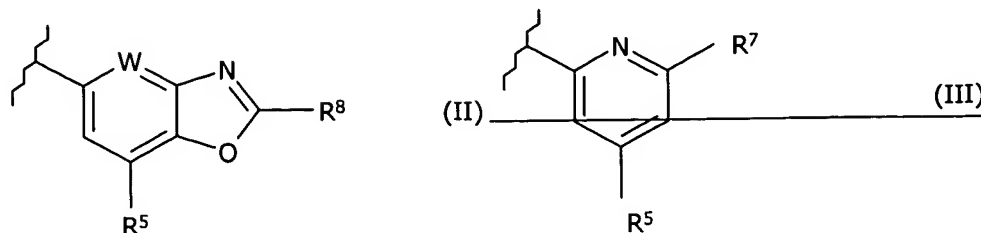
25. (Currently amended) A ~~compound~~ product of ~~any of~~ claim[[s]] 20 ~~to 24~~ wherein CYCLE is of formula (IX):



26. (Currently amended) A ~~compound~~ product of ~~any of~~ claim[[s]] 20 ~~to 25~~ wherein ~~where~~ R<sup>20</sup> and R<sup>21</sup> are both hydrogen.

27. (Currently amended) An adenosine analogue-type A<sub>3</sub> receptor agonist having an N<sub>6</sub> nitrogen substituted by a group of the formula -CR<sup>20</sup>R<sup>21</sup>-CYCLE where

R<sup>20</sup> and R<sup>21</sup> are the same or different and H, F or CH<sub>3</sub>; and CYCLE is of formula (II)  
or formula (III):



where:

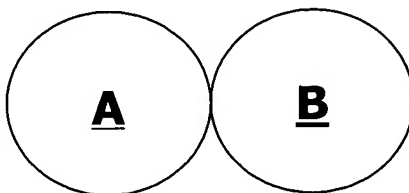
R<sup>5</sup> is iodine, bromine, methyl or trifluoromethyl;

R<sup>7</sup> is H, halogen, C<sub>1</sub>-C<sub>10</sub>-acyl, OR<sup>11</sup>, CO<sub>2</sub>R<sup>11</sup> or CONR<sup>11</sup> where R<sup>11</sup> is C<sub>1</sub>-C<sub>10</sub> hydrocarbyl optionally containing one or more in-chain and/or in-ring O linkages;

R<sup>8</sup> is -NR<sup>9</sup>R<sup>10</sup> or -COR<sup>9</sup>, where R<sup>9</sup> and R<sup>10</sup> are each independently methyl or ethyl; and

W is N or CH.

28. (Original) An adenosine analogue-type A<sub>3</sub> receptor agonist having an N<sub>6</sub> nitrogen substituted by a group of the formula -CR<sup>20</sup>R<sup>21</sup>-CYCLE where R<sup>20</sup> and R<sup>21</sup> are the same or different and H, F or CH<sub>3</sub>; and CYCLE is a bicyclic (fused) heteroaromatic ring of the formula



wherein

ring A is a 5- or 6- membered ring characterised by the following features (in which ring positions are numbered relative to the linkage to -CR<sup>20</sup>R<sup>21</sup>-):

- i. a carbon atom at the 1-position;
  - ii. carbon atom as CH or a nitrogen atom at position 2;
  - iii. it is 3, 4 fused to ring B;
  - iv. the 5-position ring atom is substituted by a moiety R<sup>5</sup> which is H, halogen or an organic moiety having from 1 to 6 plurally valent atoms in addition to monovalent atoms selected from hydrogen and halogen;
  - v. if a 6-membered ring, it has at the 6-position a nitrogen, or -CM- where M is H, CH<sub>3</sub> or F;
- ring B is a 5 or 6 membered ring characterised by the following features:
- (a) an in-ring heteroatom including O, N or S joined to the 4-position of ring A;
  - (b) said in-ring heteroatom is joined within the ring secondly to a carbon which is substituted by a moiety R<sup>8</sup> which is -N(C<sub>2</sub>H<sub>5</sub>)<sub>2</sub>;
  - (c) an in-ring atom joined to the 3-position of ring A which is N, O, S or C, said C being in the form of a CH or CO group;
  - (d) in the case of a 6-membered ring, the remaining ring member is nitrogen or carbon in the form of CH.

29. (Canceled)

30. (Currently amended) ~~A product of any one of claims 1 to 26 or an agonist of claim 27 or claim 28 for use in a method for selectively activating A<sub>3</sub> adenosine receptors in a mammal[[.]], comprising administering to the mammal an effective amount of a product of claim 1 or an agonist of claim 27.~~

31-32. (Canceled)

33. (Currently amended) ~~The use of a product of any one of claims 1 to 26 or an agonist of claim 27 or claim 28 for the manufacture of a medicament for use~~ A method for preconditioning the heart of a subject to protect it from ischaemic damage[[.]],

comprising administering to the subject an effective amount of a product of claim 1 or an agonist of claim 27.

34-35. (Canceled)

36. (Currently amended) A pharmaceutical composition comprising a product of ~~any one of claim[[s]] 1 to 26~~ or an agonist of claim 27 ~~or claim 28~~.

37. (Original) A pharmaceutical composition of claim 36 which is an intravenous formulation.

38. (Canceled)

39. (Currently amended) A method of stimulating adenosine A<sub>3</sub> receptors, comprising administering to a mammal in need of such treatment a therapeutically effective amount of a product of ~~any one of claim[[s]] 1 to 26~~ or an agonist of claim 27 ~~or claim 28~~.

40. (Currently amended) A method of reducing tissue or organ damage (~~e.g., substantially preventing tissue or organ damage, inducing tissue or organ protection~~) resulting from ischaemia or hypoxia, comprising administering to a mammal in need of such treatment a therapeutically effective amount of ~~an agent selected from a product of any one of claim[[s]] 1 to 26 and~~ or an agonist of claim 27 ~~or claim 28~~.

41. (New) The method of claim 39 wherein another cardiovascular drug is additionally administered to the mammal.